

CLAIMS

1. Portable watch with radiation monitor which incorporates a case and housed in it timekeeping and time indicating unit, radiation intensity measurement unit, radiation detector, control unit (micro controller), display unit and power supply unit, *with the distinction* that, as the said radiation detector is a Geiger-Muller counter and wherein a voltage pulse converter for the Geiger-Muller counter power supply is housed in the case and wherein the said micro controller is connected to a voltage changer.

2. Portable watch with radiation monitor as claimed in claim 1, *with the distinction* that, as the said Geiger-Muller counter is provided with the additional switch key that is connected to micro controller and which ensures measuring of radiation intensity in gating mode.

3. Portable watch with radiation monitor as claimed in claim 1, *with the distinction* that, as the said assembly incorporates an additional watch mechanism with differ power supply unit which provides the said timekeeping and time indicating unit and radiation intensity measurement unit with the separate feeding.

4. Portable watch with radiation monitor as claimed in claim 1, *with the distinction* that, as the said assembly incorporates a Geiger-Muller counter actuation pulse former, the inlet of this pulse former is connected to low-voltage side of the power supply filter capacitor of the Geiger-Muller counter and its outlet is connected to micro controller.

5. Portable watch with radiation monitor as claimed in claim 1, *with the distinction* that, as the said assembly incorporates a filter-rectifier applying reference voltage from secondary coil tap of the transformer to cathode of the Geiger-Muller counter.

6. Method of converting low tension into high constant tension involving converting of direct current into pulse current by means of electronic switch key and the rise of impulse tension up to impulse tension of the predetermined value by means of step-up transformer, with the subsequent rectification, stabilization and filtering of the achieved impulse tension, *with the distinction* that, as at opening

the switch key by means of threshold element, the return impulse voltage at primary winding is being compared with the predetermined value and frequency of switch key control impulse is being changed depending on the presence of impulse at the threshold device, here switch key control impulses come from micro controller; and
5 when the signal from the Geiger-Muller counter is received, an additional switch key control impulse is sent.

7. A compact voltage changer, preferably for portable timepieces and devices, containing direct voltage source, unipolar transistor functioning as a disconnecting piece, step-up transformer, micro controller, rectifier and filter of the
10 output voltage, *with the distinction* that, as a threshold element being installed in the primary winding of the transformer is connected to the micro controller while micro controller data bus is connected to unipolar transistor base.

8. A compact voltage changer, preferably for portable timepieces and devices as claimed in claim 7, *with the distinction* that, as a pulse
15 former of signal detector is connected with its inlet to radiation detector and with its outlet to micro controller.

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